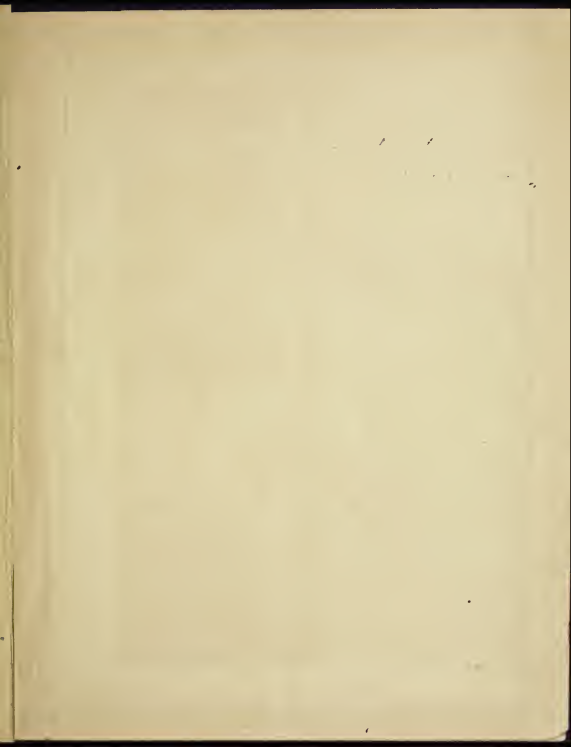


Graff

The Newberry Library  
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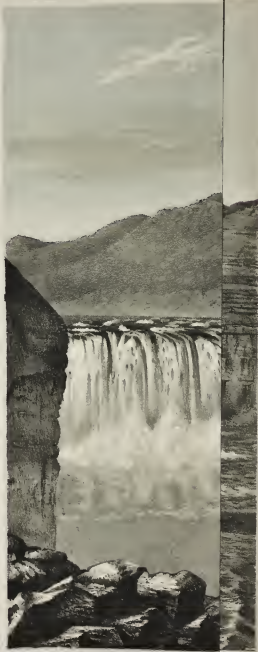


Presented to Louis McLane, Esq., by the author,

Alfred C. Matthews.

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PENCIL SKETCHES  
OF  
MONTANA.

BY  
A. E. MATHEWS.

*'No man has seen America, who has not seen the Rocky Mountains.'*—*Chief Justice H. L. HOOPER.*

*New York :*  
PUBLISHED BY THE AUTHOR,  
925 BROADWAY, N. Y.  
1868.



Engraved according to order of Congress in the year 1862 by A. L. Kelso. In the Clerk's Office of the District Court, of the Eastern District of the State.

A. E. MATHEWS DUL. & LITH. N.Y.

THE GREAT FALLS OF THE MISSOURI

1862-1863

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Entered according to Act of Congress, in 1895, by A. E. Matthews, in the Clerk's Office of the District Court of the United States, for the Southern District of New York.

THE NEWBURY  
LIBRARY

PRINTED BY CHAPIN & SIMPSON, 14 ANN STREET.

## PREFACE.

**I**N presenting this work to the Public it is perhaps scarcely necessary to say that it is not the intention of the author to elaborately describe the many beautiful scenes to be found in this charming country, but to represent some of them as accurately as possible with the pencil. To publish, successfully, a volume containing so many expensive plates, it has been necessary for the author not only to make the sketches, but to draw them on stone, preparatory to their being lithographed. This has occupied so much of his time as to leave but little to devote to the letter-press. Besides, so much has been written by abler pens that it will doubtless be considered superfluous to elaborate in this way. A simple sketch will often convey a better idea of a locality than lengthy descriptions, and while several able works have been written, or are in press, descriptive of the country, no correct pictures have yet been published for general sale.

The scenes are here arranged nearly in the order in which the author saw the localities while making a tour through the country.



## INTRODUCTORY.

THE author has frequently been asked why he did not take a Photographic Instrument along, in order to photograph Mountain scenery; for it is generally supposed that a photograph of Mountain scenery is always perfectly accurate. This, however, is far from being the case. In taking a picture, the lens of an instrument must be adjusted to focus on a certain object or objects; and all others more distant, or nearer, will be more or less indistinct. Another disadvantage of an instrument is that objects near at hand are magnified, while those farther off are reduced in size. So apparent is this defect in large photographs of persons, that a small picture is now first taken, and afterwards copied and enlarged. Shadows, too, are apt to be deepened and lights intensified. A good artist can, with ordinary care, produce a more accurate and pleasing picture with the pencil or brush.









*Shown according to and of Congress in the year 1864 by A. E. Matthews on the Coast Office of the United States of New York. — A. E. MATTHEWS DEL. & LITH. N.Y.*

BEAVER HEAD ROCK

1110-7



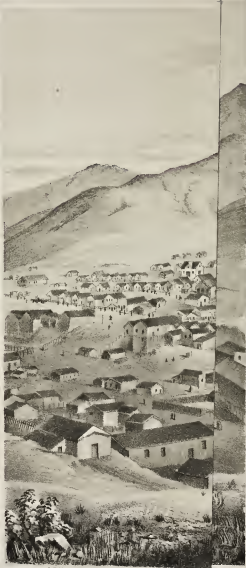


— A. E. MAINS OIL & LUM. CO. —

# IN THE STINKING WATER VALLEY.

— 11 —





A. E. MATHEWS DEL. & LITH. N.Y.





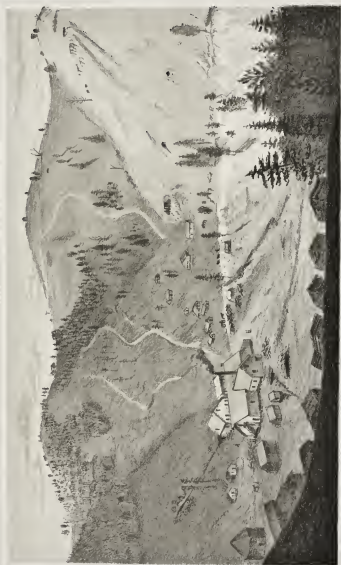
A. E. MATHEWS DEL. & LITH. N.Y.

Engraved according to a map of Jerusalem in the year 1838 by J. B. Smith, Esq., and published by the same author in the year 1839.

VIROBENIA 1838



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Stones thrown by the English in the year 1858 by the English in the (left) of the English of New York. — A. E. MATHEWS DEL. & LITH. N. Y.

UNION CITY.





Printed at the "Graphic" Press, 107 Nassau St., N.Y. Published by A. E. Matthews & Co., 107 Nassau St., N.Y.

# BALD MOUNTAIN.

(No. 1)









valent according to some legends in the year 1087 by Ad. Rocco in the Church of the Augustinians at the Southern District of New York. — A. C. MATTHEWS DEL & LITH. N.Y.







Forever according to map of Oregon in the year 1878 by A. E. Mathews in the Great Office of the State of New York, A. E. Mathews del. & lit. N. Y.









A. E. MATHEWS DEL. & LITH. N.Y.





A. E. MATHEWS DEL. & LITH. N.Y.

Engraving according to a sketch by J. M. Smith, 1847, and a plan of the river by J. M. Smith, 1847, under their office of the Survey of the Western Coast of the River. A. E. MATHEWS DEL. & LITH. N.Y.

THE MISSISSIPPI RIVER  
FROM THE MOUTH OF THE MISSISSIPPI



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Head of the Missouri River, from the mouth of the Yellowstone, July 17th, 1859. A. E. MATHEWS DEL. & LITH. N. Y.

# HEAD WATERS OF THE MISSOURI

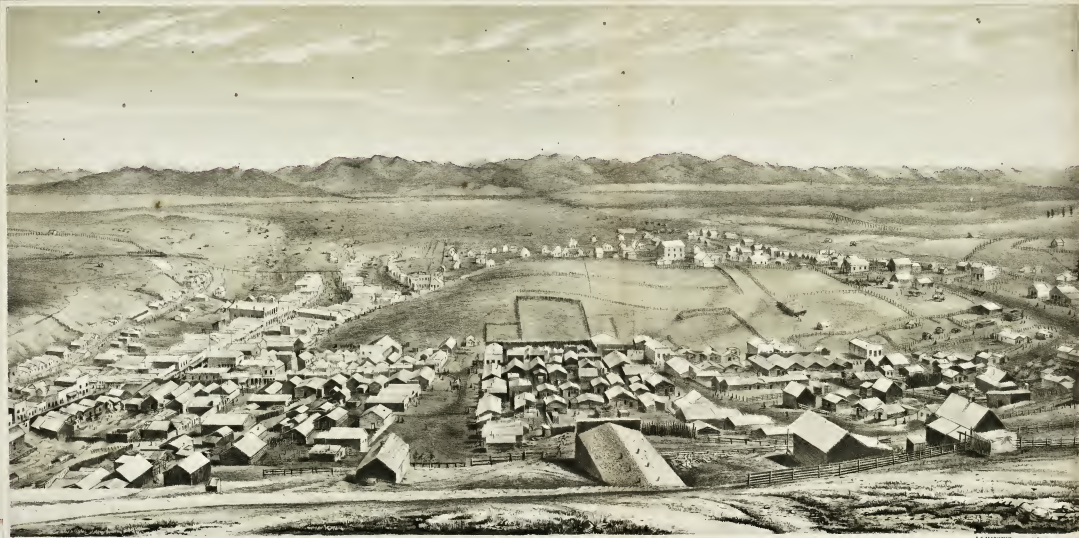
1859





LITH. N.Y.





A. C. MATHEWS LITH. N.Y.

HELENA  
MONT. VII

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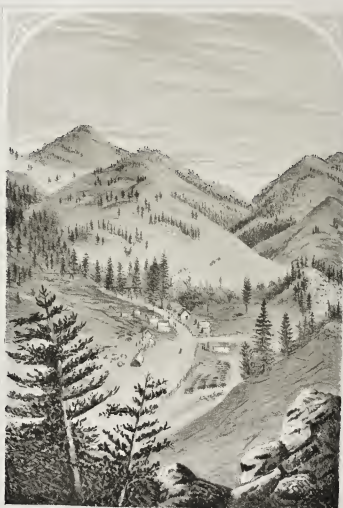
This tree was planted in the year 1811 by A. E. Mathews in the County of Clark, Mo. It is now 70 years old and is still in full bearing. It is the only one of its kind in the State. It is now 70 years old and is still in full bearing. It is the only one of its kind in the State.

A. E. MATHEWS DEL. & LITH. N.Y.

THE HANGING TREE  
 1811-1881







*Etched according to order of Congress in the year 1868 by A.E. Mathews in the Clerk's Office of the District Court of the Southern District of New York.*

A.E. MATHEWS DEL. & LITH. N.Y.

UNIVERSITY





2000 ft. high above the level of the sea (1000 ft. high above the level of the sea) the highest point of the New York State.

A. E. MATHEWS DEL. & LITH. N.Y.

NEW YORK GULCH.





A. E. MATHEWS DEL. & LITH. N.Y.

THE GATE OF THE MOUNTAINS.  
PLATE XVII





View from the "Gate of the Mountains" in the Cascade Range, near the town of Astoria, Oregon, in the year 1841 by A. L. Mathews.

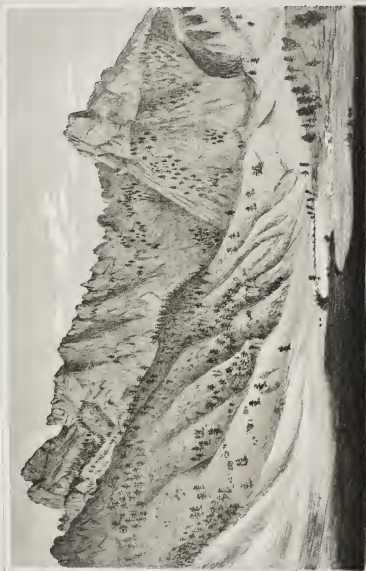
A. L. MATHESON DEL. & LITH. N.Y.

# GATE OF THE MOUNTAINS.

1841



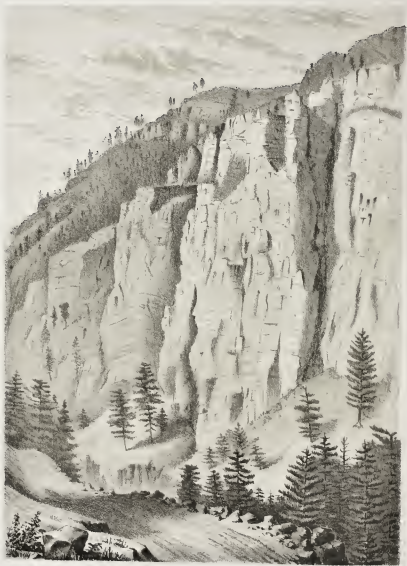




—Lith. Drawing of J. L. C. in the year 1852 by A. Mathews in the Clerk's Office of the District Court of New York. — A. E. MATHEWS DEL. & LITH. N. Y.

# BEAR TOOTH MOUNTAIN





\*) after Congress in the year 1968 by A.E. Mathies in the Credit Office of the DLR

A E MATHEWS DEL &amp; LIEN NY





H. MATHEWS DEL. & LITH. N.Y.

TRICKERY PEAK CANYON.





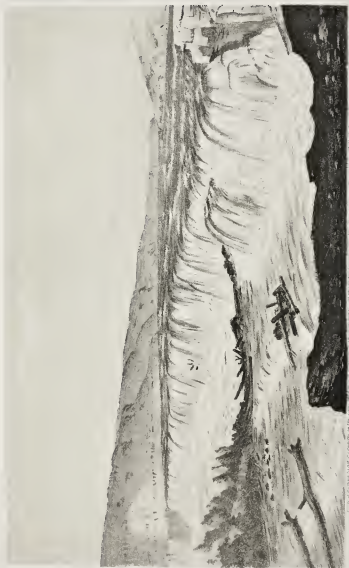
Engraved according to a drawing by A. C. Matthews in the year 1855. The engraving is the property of the American Museum of Natural History, New York.

# BIRD TAIL MOUNTAIN

A. C. MATTHEWS DEL. & LITH. N.Y.



CHICAGO, ILL.



AL. MATHEWS OIL & LUM. N.Y.

# FALLS OF THE MISSISSIPPI.

RECEIVED JAN 10 1960



Illustration showing the Palisades in the year 1885. The illustration is the property of the Palisades Park and Hotel Co., New York. — A. E. MATTHEWS DEL. & LITH. N. Y.

## THE PALISADES





AT MATHIAS BLUES HILL N.Y.

CITADEL ROCK.

Painted by Henry to the 1st of August in the year 1855 by J. C. Brown. The rock was discovered by the same party in the year 1855.







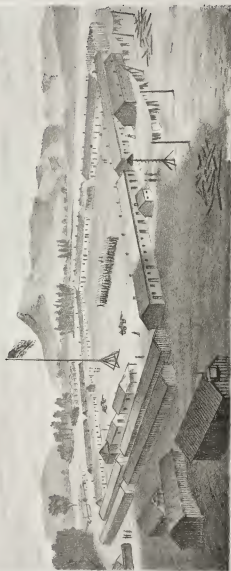




*Extensive country is now occupied by the Indians. The view is from the Indian village of Pagan, looking towards the mountains of the Pagan district of New York.*

## FORT PAGAN





*Entered according to act of Congress in the year 1884 by A. E. Mathews in the Clerk's Office of the District Court of the Southern District of New York.*

A. E. MATHEWS DEL. & LITH. N. Y.





ALPINE MOUNTAINS DEL. & CO. N.Y.

DEER MOUNTAIN VALLEY

# PENCIL SKETCHES

OF

# MONTANA.

**M**ONTANA, although the youngest of the mining territories, is one of the most prosperous, and there are persons who think it richer than any of them. The territory is three times as large as the State of Missouri, and contains 172,800 square miles, with a population of 65,000. Nowhere within the bounds of the Union is there an extent of country more full of the elements of future greatness. Everywhere, the mountains, valleys and plains are rich in novelty and beauty. In every direction there is a surprise for the traveler—where nature forms unique and beautiful combinations. In some localities, objects and phases of nature are presented of a most novel character, while in others the scenery is impressive and grand. Yet still much intervening country is monotonous and uninteresting to the ordinary traveler.

In the fall of 1862, gold was discovered in paying quantities on Grasshopper Creek, and the first principal settlement was here made and called Bannock, after the Indians

who roamed over the broad valleys in this part of the country: a few whites had for several years previous lived in the Deer Lodge and Bitterroot valleys. The first inhabitants were mostly miners and prospectors from California, Colorado and Nevada, who brought with them the valuable experience of years labor in the Gold and Silver mines of those countries. As news of the rich gold fields of Montana spread far and wide, men from all parts of the States began to flock in, and in the following spring, Grass-hopper Gulch was swarming with busy miners, and a city of cabins and tents, containing thousands of inhabitants sprang up like magic. With the new comers were desperadoes from the Atlantic and Pacific Cities; and for some time it seemed doubtful which would prevail, the miners or the robbers; but the determined spirits of the "Vigilants of Montana," and the swift and terrible justice administered by them, finally put a stop to their wholesale murders and robberies, and the desperadoes were either hung or banished from the country.

Montana is remarkable for the immense mineral wealth that lies buried within her borders, for the richness of her mines, and for the comparative ease with which the gold is separated from the ore. Besides Gold, Silver and Copper, the territory abounds in Coal and Iron; Petroleum, Slate, Syenite, Fire-clay, Grindstone; White Marble and Chalk are also found. Indications exist of some of the precious stones, and when the matter is better understood, stones of value will undoubtedly be found.

Rich and productive as the mines of Montana are, her chief source of future wealth lies in her countless acres of the finest pasturage in the world. The grasses are peren-



nial and in great variety; they seem to combine to a certain extent the qualities of hay, grain and grass, and owing to the dryness of the climate are of slow growth, which greatly increases their nutritive qualities. The absence of rain throughout most of the territory during the latter part of summer and fall, together with the extreme dryness of the air preserves the herbage and grass, so that the pasturage is excellent during winter, in localities where the surface is not covered with snow. In many of the valleys, and on the sunny slopes, snow scarcely ever remains long, so that cattle and horses keep in good condition during winter with no other food than what they gather.

The climate of Montana is remarkably mild and delightful in summer, but the winters are long and severe, and in the mountains intensely cold. The dryness of the atmosphere, however, and the uniformity of temperature renders the cold less chilly and penetrating than it is in the same latitude farther east. The purity, rarity and dryness of the climate have a magical effect on invalids. In many instances curing chronic complaints and giving the sufferer a new lease of life. In cases of weak lungs, one summer's trip through the mountains and valleys will so strengthen and invigorate them, that the system is prepared to resist the evil effects which are often the result of a sedentary life, in a climate so changeable as that of our eastern cities.

The main range of the Rocky Mountains runs with a serpentine course through the territory in a direction nearly north and south, making immense curves, and sending out numerous spurs, forming an irregular belt three hundred miles wide. This immense belt is beautifully diversified with lofty mountains, broad valleys, rugged hills, wooded slopes

and level plains, and is watered by clear and limpid streams. That portion of the country east of the Mountain belt is prairie.

Eminent European scholars and tourists have described the White Mountains of New Hampshire as possessing scenic beauty superior to many famous resorts in Europe that are yearly crowded with visitors; yet the author found nothing in the White Mountains that would at all compare with scores of localities scattered broadcast throughout Montana. The entire country presents a magnificent field for geological research. But in order to fully appreciate its vast and varied resources it is necessary to travel throughout its length and breadth.

The agricultural products of Montana are wheat, oats, rye, barley, potatoes and all the hardy vegetables. The climate is not well calculated for fruit, although the matter has not been thoroughly tested. Owing to the dryness of the climate, and the almost total absence of rain in summer, irrigation is necessary.

Wells, Fargo & Co., one of the institutions of the country, connect all the principal mining towns of Montana with the eastern world, and with each other by a daily line of coaches; carrying the United States mails, passengers, express packages and money, and doing a general banking business.

## BEAVER HEAD ROCK.

### PLATE I.

**W**HEN entering the territory of Montana by the Salt Lake road the first locality of special interest is Beaver Head Rock, so-called on account of its resemblance to the head of a beaver, although it is a most accurate representation of both the head and body of that industrious little animal.

Wells, Fargo & Co's Stage Line from Salt Lake City to Virginia City and Helena passes down this Canyon, and at its mouth, near Beaver Head Rock, the Company have a station, Beaver Head Station, known as the junction of the Coaches, where a branch leaves the main line for Bannock, a distance of 25 miles.

## In the Stinking Water Valley.

### PLATE II.

**T**HE Indians call the stream that runs down this valley, Passamari or Stinking Water, and have a tradition that at its head was a burial place, and as they do not bury their dead, but place them on rude platforms elevated in the air, the water was thereby contaminated. Another tradition among them, by which they account for the name, is that a large herd of buffaloes were caught in an early and deep snow at its head, and perished. The decomposition of this vast herd during the following spring and summer, tainted the waters of the stream. Indians have a singular way of naming persons and places after peculiarities, circumstances or events. There are several streams in the north-western country with similar names; some of them so named on account of the peculiar taste imparted to their waters by petroleum springs.

The sketch was made where the road from Virginia City to Salt Lake descends into the valley, thirteen miles from Virginia. That part of the valley suitable for farming is narrow, and confined to the bottom; the long slopes leading up to the mountains are broken by deep ravines, and are mostly out of the reach of irrigating ditches, but covered with short nutritious grass. The mountains on the west side (those shown in the picture), are well timbered, but those on the east contain but little timber, and are more rugged and rocky. The view on first entering the valley from below is very fine, but too vast and complicated for plates of this size.

## VIRGINIA CITY.

## PLATE III.

**M**INING towns are apt to be uninteresting in appearance and inconveniently laid out, but Virginia City, the Capital of Montana, seems to be free from these objections. There is perhaps no other city in the entire western country that contains a pleasanter or more public spirited set of people. The place has several fine buildings, and chief among them is the Masonic building. The view is from the cemetery, looking up Alder gulch. This gulch is sixteen miles in length, and although many millions of gold have been taken out, yet it is supposed there is still a larger amount remaining. The precious metal still continues to be taken out in paying quantities, and many of the claims will last several years yet. The source from which all this immense treasure emanated must be rich indeed, and such, so far, proves to be the case: the lode mines in the mountains near Summit and Union cities are very rich in gold, the view is looking in that direction. Nine miles up from Virginia City—on the very top of the divide—is the crater of an extinct volcano, that is several miles in circumference. The mountain slopes around Virginia are many of them formed of lava from this primeval volcano.

Three months after gold was discovered in Grasshopper Gulch, Alder Gulch was "struck," and thousands of adventurers flocked thither. Virginia City, Nevada, Junction, Highland and Summit sprang into existence almost in a day.

Judge Hosmer, in a lecture delivered in New York City,

in speaking of the hardships endured by the first settlers of Bannock and Virginia City, says:


"Both these gulches were rich in gold dust, but their development was attended by embarrassments of which the people of the States have little or no conception. Besides the constant exposure to robbery and murder by the "road agents," the Snake Indians, who dwelt in this vicinity, were at that time attacking and killing emigrants while on their way through the country; there was little food except such as was brought down by the rifle; flour there was none; tools were scarce; lumber, for want of saw-mills, could not be obtained; no clothing to renew the worn suits of the miners; few blankets and buffalo robes to protect them against the rigors of a severe climate; four hundred and fifty miles of sand and mountains between them and the nearest abode of civilized man; and few conveyances of any sort with which to make the toilsome and dangerous journey. This picture is not overdrawn."

There is, perhaps, no other occupation that has contributed so much to the material wealth and credit of the country as mining. A miner's life is one of constant exposure, and hard labor: he may be unsuccessful in saving sufficient gold to pay for his time and outlay. He may spend a thousand dollars for flumes or ditches, and weeks or even months of time, and take out but eight hundred dollars in gold; he loses his time, expenses, and two hundred dollars, but the country at large has been made eight hundred dollars richer by the operation. How many are the instances of this kind! True, many realize fortunes in a short time, but with the majority of miners this is not the case. There are difficulties and obstacles in both gulch and lode mining which it is impossible for those not familiar with the business to realize; and it would certainly be advanta-

geous to the country for Government to encourage mining in every possible way.

## UNION CITY.

### PLATE IV

 NION CITY consists of the Union City Mills, and the dwellings of the Agent and miners in the employ of the company. It is charmingly located in a ravine far up on the mountains' side, and commands a fine view of the Great Rocky Range beyond Bannock, more than a hundred miles distant; and also a beautiful view of the Stinking Water Valley and Mountains, shown in Plate II. The dense forests of pine on this range have from here a velvet-like appearance.

In this plate, Grant Hill is seen on the right, and the Oro Cache Hill on the left and centre. The shaft house over the Oro Cache mine is seen on top of the hill in the centre of the picture. The road extending around Grant Hill from the mill, is the road to Summit City, which lies on the opposite side of the hill.

## BALD MOUNTAIN.

## PLATE V.

**B**ALD MOUNTAIN is the most interesting and the highest Mountain in this part of the territory. Its altitude is 8,200 feet above tide water. The sketch was made from the Oro Cache mine. The Lneas mill is seen on the right, far down in the ravine. Petrified Shells are found on the sides and top of this peak, which shows that it once reposed in the bed of an ocean. Its sides are seamed with gold mines; and from the surface of these mines the rich deposits all along Alder Gulch have been washed.

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## IN THE MADISON VALLEY.

## PLATE VI.

**T**HIS is one of the many delightful valleys peculiar to Montana. Madison River is the middle fork of the Missouri, and can occasionally be seen from this elevation as it meanders through the valley. The Madison range of mountains here represented are undoubtedly the most picturesque in the territory. The singular looking, snow-covered peak near the right is called Mount Washington. The view is from the lava slopes of the extinct volcanoes before men-



tioned, and commands a fine view of the country below, as well as the opposite range. Coal, Iron, Slates, Syenite, Fire-clay, Grindstone, Chalk and White Marble have been discovered in the valley.

It is well known that the crust of the earth is nothing but a thick shell, containing within its circumference a mass of molten rocks and minerals, and that mountains and mountain chains are the effect of great convulsions of the globe caused by this internal heat, when the surface or crust of the earth is rent asunder, and these immense masses of rock are thrown up. But still we are apt erroneously to regard it as a solid and immovable foundation. Professor Agasiz says, that


"So far from being immovable, it has been constantly heaving and falling; and if we are not impressed by its oscillations, it is because they are not so regular or so evident to our senses as the rise and fall of the sea. The disturbances of the ocean, and the periodical advance and retreat of its tides, are known to our daily experience: we have seen it tossed into great billows by storms, or placid as a lake when undisturbed. But the crust of the earth also has had its storms to which the tempests of the sea are as nothing—which have thrown up mountain waves twenty thousand feet high, and fixed them where they stand, perpetual memorials of the convulsions that upheaved them. Conceive an ocean wave that should roll up for twenty thousand feet, and be petrified at its greatest height: the mountains are but the gigantic waves raised on the surface of the land by the geological tempests of past times. Besides these sudden storms of the earth's surface, there have been its gradual upheavels and depressions.

going on now as steadily as ever, and which may be compared to the regular action of the tides. These, also, have had their share in determining the outlines of the continents, the height of the lands, and the depth of the seas."

These minor changes of the level of the earth's surface or crust, no doubt have their influence in the changes of temperature that are constantly going on; and also in determining to a great extent the severity or mildness of our winters, and the heat or coolness of our summers.

## Exit of the Yellowstone from the Mountains.

### PLATE VII.

NOTHING can exceed the grandeur of the mountain scenery of the upper Yellowstone. The view represents its exit from these mountains, as seen from a point three miles below, and thirty miles from Bozeman. At the time the sketch was made (1867) no white inhabitants lived in the valley below the canyon, but several mining camps had been established in the mountains on the river and some of its tributaries. In the foreground of the view are seen two antelopes; these animals are quite numerous in the region, and during two days that the author remained in the valley, he saw many large and small herds;

elk and mountain sheep also abound, and have been frequently seen in immense droves.

The Yellowstone is one of the most peculiar rivers on the continent; and is 1,600 miles in length. It is this stream and some of its tributaries that give to the Missouri its turbid appearance. Their waters, however, are all clear until nearing the Bad Lands, a region destitute of vegetation and without springs or small streams.

This barren waste is thickly strewn with animal and vegetable petrifications, and curious stones; and has been but little explored. It is very similar in some respects to the country along Bitter Creek and Duck Lake on the Denver and Salt Lake road.

The source of the Yellowstone is a clear, deep beautiful lake, far up among the clouds; that is kept cool by drippings from the eternal glaciers. Near this lake the river makes a tremendous leap down a perpendicular wall of rock, forming one of the highest and most magnificent waterfalls in America.

## In the Yellowstone Valley.

### PLATE VIII.

**B**EFORE the territory of Montana was organized or settled, a captain of one of the lower Mississippi steamboats, who had visited the Yellowstone Valley, described it

to the author as being the most beautiful place he had ever seen. The valley is much like many others in the Territory, only on a grander scale. The sketch was made at a point four miles below the exit of the Yellowstone river from the mountains. The following description of the river and valley is from the Montana Post.

"This is one of the most beautiful streams on the continent. The most practicable approach to it, is at the canon thirty miles beyond Bozeman, one hundred miles distant from this city. That has been the point of departure for the several boat expeditions, that have within the past two years been made, *via* the Yellowstone and Missouri, to the States. It is remarkable for some of the most stupendous scenery amid the Rocky Mountains. The rocks on either side of the river for many miles, are several thousand feet vertical height—and seen through the gorge formed by them, the Rocky Mountains furnish a back ground of wonderful grandeur and sublimity. For many miles down the river, the outlines of this majestic scene are visible to the beholder, and it seems by distance to increase in enchantment. The river for eighty miles below the canon runs between abrupt banks, covered with verdure, presenting at almost every angle, small copses of cottonwood. The rapids are very numerous, and many of them calculated to alarm the voyager, who for the first time ventures down them, though with skillful pilotage they are void of danger. There is nothing in this part of the river of any interest. The land is too high for cultivation, and the grasses which cover it are stunted and thin. The river is full of fine trout and bass, and the numerous sedgy islands are inhabited by a great variety of water fowl. Gradually widening, the river suddenly presents on either bank, lofty cliffs of yellow sand-stone, which at first, are some distance from its margin, but soon they approach it so closely as to confine the stream, and overhang with their craggy summits its agitated surface. The perpendicular sides of these cliffs have been curiously eroded by the elements, into the

appearance of hieroglyphics, which cover them from base to summit. In many instances the characters following the stratification seem to be lined like the characters delineated on the old Egyptian temples of Edfou and Luxor, and to make the resemblance more perfect, many of the rocks are capped tower-like, or castellated tops, or spring into pyramids. The intervals which occur in these cliffs are occupied by cottonwood groves of prolific growth and superabundant foliage which jut into the river, and on every side are so regular and uniform that it is almost impossible to resist the belief that they have not been both planted and trimmed by the hand of man, and are in fact the cultivated grounds belonging to some old medieval castle. Whenever a cliff is overhanging it gives protection to myriads of swallows' nests beneath the shelving rock. Unequal in height, varying from one hundred to three hundred feet, many of these crags towering above the river, and seen for many miles along its beautiful ranches, resemble extensive fortifications and citadels. Occasionally for several miles they border the river, and rise to such a height as to interrupt the sun's rays, giving a sombre cast to the river, while passing between them. This yellow sand-stone rock, with only occasional interruptions, traverses the line of the river at greater and lesser distances from its margin for more than three hundred miles. The country beyond the ridge stretches out into plains on either side, which at the distance of from two to four miles, are skirted by heavy uplands sparsely covered with stunted timber. These plains are covered with grass, and afford the finest ranges in the world for buffalo, antelope and elk, herds of which may often be seen by the voyager, roaming their immense extents. They are probably, for climate, timber, soil and convenience of irrigation, the finest agricultural lands in Montana. The water of Clark's Fork, Big Horn and Rosebud, bring with them from the mountains large quantities of debris, which impart to the waters of the Yellowstone a milky appearance that increases in density from the mouth of Clark's Fork, until it reaches Powder River, at the commencement of the Bad Lands, where the color changes to a drab almost as

dark as that of the Missouri. The passage of this river through the Bad Lands is quite as remarkable as its passage through the sandstone. The banks are entirely bare. Lofty pinnacles of clay, stratified with innumerable shades of color rise on either hand, frequently to the height of a thousand feet. Groves of stunted cottonwood, apparently crowded in between these pinnacles, furnish a melancholy contrast to the gorgeous groves further up the river. Ranges of low hills which have been burnt until the material of which they are formed has become one solid red brick, some with table summits, and others conical and sharp, cover the surface of the country in all directions. The river becomes sluggish, expands to more than a mile in width, and is filled with shifting islands of sand. There is not a foot of soil that can be cultivated, and the earth is impracticable for any kind of physical improvement.

Nearly the entire distance of this passage the banks on each side of the river present from one to three well defined veins of resinous coal, varying from two to eight feet in thickness. This coal burns readily, emits a bituminous odor, and can be found in greater quantities in this locality than probably any other in the world. Want of a good cover might probably present an insurmountable barrier to its successful development, but in all other respects it is not surpassed by any coal placer in America.

"A few miles before it empties into the Missouri, the river takes the character of that stream, the banks are low and constantly changing, sand bars are frequent, snags abundant, and all interest in scenery ceases. We think the Yellowstone might be navigated to the foot of Wolf Rapids, one hundred and fifty miles above its mouth. These Rapids are probably more dangerous than any other in the river, but in less than a hundred miles above them are Bear Rapids, which are very shallow and filled with large rocks—forty or fifty miles above them are Buffalo Shoals, where for more than six miles the river is very rapid, and ordinarily less than two feet in depth. The bottom is composed of yellow sandstone which is very hard, and crosses the river at this point in the ledge. It would be impossible to improve it.

All thoughts of ascending the river by steam to the Big Horn must be given up. The best improvement that could be made would be a wagon road along the bank, from the foot of Wolf Rapids—a work that could be constructed without any serious difficulty."

## SPRING CANYON.

### PLATE IX.

**T**HE trail from the mines on the Yellowstone to Bozeman, called Emmigrant Trail, passes through this canyon. The trail is but little used since the road to the Yellowstone has been made. The locality represented is seven miles from Bozeman. Not being able to ascertain that this canyon had ever received a name, although one of most striking grandeur, the author has called it Spring Canyon, on account of a clear and sparkling spring of immense size that rushes out from under a gigantic rock. This spring discharges hundreds of gallons of water per minute.

Near the foreground of the picture three grizzly bears are seen. These animals, like all other wild animals are very timorous of man, and stealthy in their movements; their senses of hearing and smelling are so acute that they are apprised of the approach of the traveler long before he makes his appearance, and walk off, or hide in thickets. They never attack man unless first molested—suddenly sur-

prised, fired at, or wounded,—then they are the most fierce and terrible of the savage beasts. No one would be so fool-hardy as to attack them unless with a strong party. The author has traveled thousands of miles alone in the Rocky Mountains between Southern Colorado and the British Possessions, but has never been attacked by them, and has very seldom seen them, although their tracks have been in many places quite numerous. Their food consists of grass, roots, berries, seeds and insects: of the latter their chief delight are grasshoppers. They strip the branches of wild currant bushes with their paws and eat leaves, stems, berries and all.

## IN THE GALLATIN VALLEY.

### PLATE X.

**T**HE Gallatin Valley is one of the most beautiful, extensive, and productive valleys of Montana, and is more largely cultivated than any other. The mountains represented are a portion of the Belt range as seen from the valley fourteen miles below Bozeman, which is here eighteen miles wide. The gulches and deep gorges of the mountains are well timbered with pine and fir trees, while the exposed parts are mostly without vegetation.



Miners were not the only class of men who endured hardships and toils almost beyond belief when Montana was first settled. Ranchmen or farmers had the same difficulties to contend with—high prices and scarcity of food and clothing.

Plows for breaking were worth from \$125, to \$150 in gold; common plows \$80 each; hoes \$8, picks \$15, shovels \$15, and axes \$9 each in gold; other things in proportion.

The Gallatin Valley is celebrated for its immense hay ranches; and horses and cattle are frequently driven down from the mining towns to winter at these ranches.

## THE THREE FORKS.

### Headwaters of the Missouri.

#### PLATES XI AND XII.


**T**HE Three Forks is one of those rare and beautiful localities in nature, that, when once seen remains indelibly fixed in the memory. The Jefferson, Madison and Gallatin here mingle their waters, to form the Missouri River. These three tributaries of the mighty Missouri meander gracefully through an extensive valley, their banks fringed with picturesque groups of cottonwood and willow

trees of various growths, with their sparkling waters occasionally seen through the dense foliage. Far in the distance the mountains near Virginia City are seen. The Jefferson comes in on the right, and its course is marked by a dense forest of cottonwood, nearly a mile in width. The course of the Madison is first indicated in the distance on the left, and joins the Jefferson about a mile from the point of observation; and here the Missouri commences. The mouth of the Gallatin is seen on the left. In the middle distance on the left a few houses are seen, this is Gallatin City, the county seat of Gallatin county. This place is destined at no very distant period to be a large and flourishing town; it is most desirably located in the heart of a rich and extensive agricultural country, abounding in valleys of unrivaled richness, and uplands, plains, and mountains covered with nutritious grasses. Sixty three years ago Captains Lewis and Clark encamped here and explored the country. Not being able to detect much difference between the volume of water in the Jefferson and the Madison they discontinued the name of Missouri and gave to each river a separate name, which they bear to this time, and called the junction of three, the Three Forks.

Plate XII, Headwaters of the Missouri, is a view on the river immediately below the Three Forks. The sketch of the Three Forks was made from the top of the high rocky bluff shown in this picture.

## HELENA.


## PLATE XIII.

 HELENA the commercial metropolis of Montana, like all mining towns originated from a mining camp, but its location is pleasanter and more favorable than the location of mining towns are apt to be. Before the stream of gold flowing from Alder Gulch had materially diminished in volume, a rich gulch was discovered one hundred and twenty seven miles from Virginia City and called "Last Chance." Thousands of miners flocked thither and encamped in the gulch near its mouth, and the settlement was called Helena. Helena is the centre of numerous rich mining districts and towns, one of which (Unionville) is represented in plate XV. from a sketch by Prof. P. Tufts. The Hangman's Tree plate XVI. stands in a small gulch near Helena, a monument of terror to desperadoes. The view of Helena does not show the place to advantage, as it slopes from the point of observation, so that many of the houses are not seen at all, but no other point more favorable could be got. A broad valley spreads out beyond the city, dotted with farms and houses; and at the distance of twelve or fifteen miles the mountains commence to rise. The most distant peaks are thirty miles off. In the clear, pure air of Montana these mountains stand out distinct but soft; but sometimes they are entirely hidden by smoke from burning forests and prairies; and at other times the smoke partially conceals them, giving them more grandeur and greater apparent altitude and distance

## NEW YORK GULCH.

## PLATE XVI.

**N**EW YORK CITY is a thriving mining town eighteen miles from Helena; it is located in a gulch of the same name. This part of the country is notable for lofty mountains, picturesque little valleys and deep canyons, with high and perpendicular walls of massive rocks. Plate XVI, is a view in New York Gulch, one and a half miles below the town, and represents one of the most magnificent of these canyons. The gulch and placer mines are quite numerous in the district, and have contributed much to the national wealth.



## GATE OF THE MOUNTAINS.

## PLATES XVII AND XVIII.

**O**F all objects of interest to be found in Montana, at least all that the author has seen, he is inclined to give the palm to the Gate of the Mountains. It is no doubt superior to anything in the way of a canyon to be found in the entire western country. Here the Missouri has forced a channel through a lofty range of mountains, that form massive walls on each side of nearly one thousand

feet in perpendicular height. Beyond the immense walls the mountains reach up into the heavens two thousand feet higher—their summits often covered with snow. The scenery is of such surpassing grandeur as to defy description. Plate XVII is a view just below American Bar, looking down; and plate XVIII is a view from below looking up.

## BEAR TOOTH MOUNTAIN.

### PLATE XIX.

**J**UST below the Gate of the Mountains, on the west side, there is a secluded valley of a few hundred acres, shut in by lofty mountains. Bear Tooth Mountain can be seen to the best advantage from this valley. The summit of the mountain, as seen from the Helena and Fort Benton road, has some resemblance to the teeth of a bear: hence its name. It is of porphyry rock in many places covered with carbonate of lime that appears like a slight sprinkling of snow.

## PRICKLY PEAR MOUNTAIN.

## PLATES XX AND XXI.

**T**WENTY-FIVE miles from Helena the Fort Benton road passes through Prickly Pear Canyon. This road is the great thoroughfare of Montana. The Little Prickly Pear here follows a deep gorge through the same range that is severed by the Missouri at the Gate of the Mountains. The most interesting part of the canyon is the first two miles from the upper entrance; the rocky walls are here almost perpendicular for eight hundred feet. Plate XX is a view from a point a little above the first bridge from the upper entrance, looking up; and plate XXI is a view a short distance below looking down, and includes the next bridge below. In this picture one of Wells, Fargo & Co's coaches are seen, and by comparison shows the immense height of the rocky walls of the canyon. These rocks are of red and green roofing slate, and are covered in many places with variously colored mosses, the brilliancy of color of these mosses, together with the reddish appearance of the rocks, give intensity to the green trees and herbage. Thus these brilliant colors compliment and strengthen each other, forming a scene of dazzling beauty and brilliancy.

## BIRD TAIL MOUNTAIN.

## PLATE XXII.

**T**HIS most singular mountain is situated midway between Helena and Fort Benton on the stage road. It is called Bird Tail Mountain on account of the resemblance of its rocky summit to the tail-feathers of a bird. This resemblance is more striking on approaching it from Fort Benton, when five to ten miles distant; although by far the best view can be had one mile and a half above the station—the view represented. It is a coarse-grained syenite of volcanic origin. One of Wells, Fargo & Co's coaches is seen in the foreground. This part of Montana is filled with singular shaped mountains, and when the air is filled with smoke from burning forests and praries, so that objects are indistinctly seen, some of them resemble castles and fortresses.

## FALLS OF THE MISSOURI.

## PLATE XXIII.

**B**ELOW the Gate of the Mountains the country through which the Missouri river flows is broken by small mountains and buttes, but gradually subsides into a vast

plain. The banks of the river for fifty miles or more are low, but it then cuts a deep channel into the rocky crust of the earth, forming a succession of cataracts for fifteen miles, and within this distance its perpendicular descent is about three hundred and sixty two feet. Plate XXIII. represents the second principal fall, seven miles below the mouth of Sun River, and about ten miles from the stage road. The middle and left hand side of the fall has a descent of forty feet, while the right hand side consists of a succession of four falls, (three of which are seen in the picture) with an island separating them from the main volume of water on a lower level.

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## GREAT FALLS OF THE MISSOURI.

### PLATE XXIV.

THE name Great Falls of the Missouri has been given to the cataracts collectively, although it is applied more particularly to the greatest one which is represented as a frontispiece. By the river gradually wearing deeper into the rocky surface of the earth, the bluffs extend two hundred feet above its waters. The fall is eighty-four feet perpendicular, and the width of the river three hundred yards. Below the falls, and midway between the high



walls that enclose the river, there is a rocky bluff connected to the right hand bank by a rough and uneven piece of ground, which at high water forms an island.

Grandeur and picturesqueness of form are most happily combined in the Great Falls of the Missouri; and there is no spot in the north-west so much calculated to inspire the beholder with admiration for the beautiful in nature. This is the last of the series of cataracts, and is thirty-six miles above Fort Benton. The sketch was made from the left hand bank, which has rarely been visited by white men. The artist crossed the river below the falls on a small log raft, at eminent peril of being dashed by the furious current against some of the many sharp rocks with which it is filled. On either side of the Missouri there are long Buffalo trails, worn in many places into gulches, leading from the prairies at the foot of the distant mountains to the river. Since the extensive travel on the Helena and Fort Benton road, Buffaloes are becoming scarce in this part of Montana.

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## FORT BENTON.

### PLATE XXV.



FORT BENTON is at the head of navigation on the Missouri River, and nearly three thousand miles

above St. Louis. It has long been the principal trading post of the North West Fur Company; and their fort is plainly seen in the picture. The town has sprung up within three years; and, for its size, transacts an unusual amount of business; as nearly all goods, machinery, groceries, etc., brought into Montana are landed on its wharf. The view is from the bluffs near the river, one mile below town. Wells, Fargo & Co., run a daily line of coaches between Fort Benton and Helena, a distance of one hundred and fifty miles. Benton is the principal point of debarkation for the numerous "Mackinaw" boats that leave the territory every fall for the "States."

Through the good offices of Capt. Wall, Mr. Wm. Sprague kindly presented the author with a small boat which enabled him to descend the Missouri and make sketches of the extraordinary scenery between Fort Benton and Camp Cook, now called Fort Cook.

The country near and below Benton is the home of the Black Feet Indians, a wandering, predatory race of hunters and warriors who live in tents and on horseback, and are constantly on the tramp; as they move with the grass and game. They pride themselves much on their horses; but their swiftest ones are procured of the whites. In times of scarcity they live on roots, wild rose-buds and berries, the bark of certain plants, and other vegetable productions.

## THE PALISADES.

## PLATE XXVI.

**P**LATE XXVI is a view about seventy-five miles below Fort Benton, looking down. The artist has called these high, perpendicular sandstone rocks, "the Palisades." The dark column seen beyond them is volcanic.

The course of the Missouri is very crooked, running to and from all points of the compass, and is shut in by high bluffs, principally of sandstone, in many places perpendicular, out of which the elements are constantly carving pyramids, monuments, castles, fortresses, churches, and other singular representations. Beyond, rise ranges of naked, hills stretching out into broad rolling plains, covered with short nutritious grass.

In floating noiselessly down with the current, the shifting gravel and sand on the bed of the river made a peculiar grating sound. The mountains and plains of the north west are gradually but constantly being worn away and carried down to build up a continent in the south.

## CITADEL ROCK

## PLATE XXVII.

**T**HIS is the most prominent and one of the most singular of the many curious formations of the upper Missouri. It projects slightly out into the stream. It is of volcanic origin, and contains argillaceous nodules and quartz crystals. The view is from the opposite bank, looking down. Near the foreground of the picture some elk are seen. Elk, antelope and deer frequently come down to the river to drink; and an animal that appears to be a kind of cross between a wild sheep and goat inhabits the bluffs. Bears skulk in willow thickets in the bottoms and ravines, and grey wolves and coyotes are numerous. The Bottom Lands are generally alluvial, and confined to small patches, or narrow strips along the river, that are covered with rank grass with here and there a scanty growth of cottonwood and willow trees. Beaver are very numerous along the banks and have cut down much of the timber.

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## The Church, Castle and Fortress.

## PLATE XXVIII.

**N**ATURE has here carved out of the massive sandstone bluffs most accurate representations of a Church,

Castle and Fortress, that seem as if built by the hands of man, so perfect are they in form. The Church is seen on the left, the Castle on the right, and the Fortress in the distance. They are about six or eight miles above the mouth of Arrow Creek, and are represented as seen from below looking up. The lava rocks are no less singular than the sandstone, sometimes forming immense columns.

The Missouri river flows through Montana with a serpentine course for a distance of nearly one thousand miles; and there is undoubtedly no river in the world with such a great variety of scenery, embracing lofty peaks with the accumulated snows of centuries; deep gorges, with massive perpendicular walls, stupendous cataracts and an endless variety of the most singular formations.

There was something peculiarly grand in gliding down this majestic river at night. The intense purity of the air gave additional brilliancy to the stars. The unique outlines of the rocks on the surrounding bluffs were in keeping with the uncertain and wierd sounds from either shore. The occasional rush of the waters, the howling of wolves from the bottoms, and the sudden and loud splash of beaver in the river, struck the ear with a solemn sound.

## FORT PEGAN.

## PLATE XXIX.

THIS most accurate representation of a fortress is on the right hand bank of the river, about four miles above the mouth of Arrow Creek. Like all the other curious formations of the region it has been formed by the elements out of the sandstone bluffs. The artist has called it Fort Pegan, after a band of the Blackfeet Indians who inhabit the country.

## FORT COOK.

## PLATE XXX.

FORT COOK, formerly known as Camp Cook, was established July 9th, 1866, by Col. Reeve, 13th U. S. Infantry, and is distant but little short of three thousand miles above St. Louis. Fort Pegan is seventeen miles above Fort Cook. The author here left the river, returning for his ponies at Fort Benton, with a party of soldiers who were in charge of the mail between Fort Cook and Benton.

## DEER LODGE VALLEY.

## PLATE XXXI.

**T**HIS Valley is on the Pacific side of the Great Rocky Range. The view is from a point near the thriving town of Cottonwood, and represents the Gold Hill Mountains. One of the routes from central Montana to Cottonwood is through a pass of the main chain that is little more than a valley through the mountains. In returning by this route the author looked diligently for the summit of the divide but passed it, and was following down streams that flowed into the Missouri River before being aware that he was on the Atlantic side again. This is one of the very best passes for a railroad between the Atlantic and Pacific Cities.







